

Title (en)
FOUR-WAY DIESEL CATALYSTS AND METHODS OF USE

Title (de)
VIERWEGE-DIESELKATALYSATOREN UND VERWENDUNGSVERFAHREN DAFÜR

Title (fr)
CATALYSEURS DIESEL QUATRE VOIES ET PROCÉDÉS D'UTILISATION

Publication
EP 2483537 B1 20180829 (EN)

Application
EP 10821392 A 20101004

Priority
• US 57273009 A 20091002
• US 2010051261 W 20101004

Abstract (en)
[origin: US2011078997A1] Provided are catalyst articles, emission treatment systems and methods for simultaneously remediating the carbon monoxide, nitrogen oxides (NOx), particulate matter, and gaseous hydrocarbons present in diesel engine exhaust streams. The emission treatment system of specific embodiment effectively treats diesel engine exhaust with a single catalyst article.

IPC 8 full level
F01N 3/10 (2006.01); **B01D 53/94** (2006.01); **B01J 23/44** (2006.01); **B01J 29/76** (2006.01); **B01J 37/02** (2006.01); **F01N 3/022** (2006.01); **F01N 3/035** (2006.01); **F01N 3/20** (2006.01); **F01N 3/28** (2006.01)

CPC (source: EP KR US)
B01D 53/9445 (2013.01 - EP US); **B01J 23/44** (2013.01 - KR); **B01J 29/763** (2013.01 - KR); **B01J 37/0244** (2013.01 - EP KR US); **B01J 37/0246** (2013.01 - EP US); **B01J 37/0248** (2013.01 - EP US); **F01N 3/02** (2013.01 - KR); **F01N 3/035** (2013.01 - EP KR US); **F01N 3/103** (2013.01 - EP KR US); **F01N 3/2066** (2013.01 - EP KR US); **B01D 53/9472** (2013.01 - EP US); **B01D 2251/2067** (2013.01 - EP US); **B01D 2255/1023** (2013.01 - EP US); **B01D 2255/20761** (2013.01 - EP US); **B01D 2255/2092** (2013.01 - EP US); **B01D 2255/50** (2013.01 - EP US); **B01D 2255/9032** (2013.01 - EP US); **B01D 2255/9155** (2013.01 - EP US); **B01D 2258/012** (2013.01 - EP US); **B01J 23/44** (2013.01 - EP US); **B01J 29/763** (2013.01 - EP US); **F01N 2510/06** (2013.01 - EP KR US); **F01N 2510/0682** (2013.01 - EP KR US); **F01N 2610/02** (2013.01 - KR); **F01N 2610/1453** (2013.01 - KR); **Y02A 50/20** (2017.12 - EP US); **Y02T 10/12** (2013.01 - EP US)

Citation (opposition)
Opponent : Johnson Matthey PLC.
• WO 2010051983 A1 20100514 - SUED CHEMIE AG [DE], et al
• US 2011229391 A1 20110922 - PAULUS MARTIN [DE], et al
• WO 2009093071 A1 20090730 - JOHNSON MATTHEY PLC, et al
• JP 2004060494 A 20040226 - TOYOTA MOTOR CORP
• US 2006039843 A1 20060223 - PATCHETT JOSEPH A [US], et al
• RAMSKILL ET AL.: "Magnetic resonance velocity imaging of gas flow in a diesel particulate filter", CHEMICAL ENGINEERING SCIENCE, vol. 158, 2017, pages 490 - 499, XP029838548, DOI: 10.1016/j.ces.2016.10.017
• YORK ET AL.: "Visualisation of the Gas Flow Field within a Diesel Particulate Filter Using Magnetic Resonance Imaging", SAE INTERNATIONAL, 2015, pages 1 - 9, XP055607905

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EP3708253A1; US11154847B2; EP4389260A1; EP4389261A1; WO2024134161A1

Designated contracting state (EPC)
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DOCDB simple family (publication)
US 2011078997 A1 20110407; **US 8246922 B2 20120821**; BR 112012007553 A2 20161129; CN 102597447 A 20120718; CN 102597447 B 20171103; EP 2483537 A2 20120808; EP 2483537 A4 20150318; EP 2483537 B1 20180829; ES 2699720 T3 20190212; JP 2013506787 A 20130228; JP 2016211582 A 20161215; JP 6023590 B2 20161109; KR 101708961 B1 20170221; KR 20120091164 A 20120817; PL 2483537 T3 20190228; WO 2011041769 A2 20110407; WO 2011041769 A3 20110922

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